

Paper: 1MA1/2H				
Question	Working	Answer	Mark	Notes
2	£6 – £5.64 = 36p or 50p – 47p = 3p	6.4	P1	for a strategy to compare the same number of bottles e.g. £5.64 ÷ 12 (= 47 or 0.47) or 12 × 50p (= 6 or 600) or 36 or 0.36 or 3 or 0.03
Q1			P1	for start of process to find percentage profit e.g. $\frac{36}{564}$ or $\frac{3}{47}$ or $\frac{6}{5.64}$ or $\frac{50}{47}$ or with consistent units
	6.3829787...%		A1	for answer in the range 6.3 to 6.4

Paper: 1MA1/2H				
Question	Working	Answer	Mark	Notes
18 Q2		0.98	B1	cao

Paper: 1MA1/1H				
Question	Working	Answer	Mark	Notes
9 Q3		500	M1 A1	recognition of 1.2 or 120% oe eg $600 \div 1.2$ oe or $x \times 1.2 = 600$ oe or $120\%=600$ cao

Paper: 1MA1/1H				
Question	Answer	Mark	Mark scheme	Additional guidance
Q4	30	P1	for full process to find the number of bags sold eg $5 \times 1000 \div 250 (= 20)$ OR for process to find selling price of 1 kg of sweets eg $0.65 \times 4 (= 2.60)$	This could be by repeated addition Calculations can be in £ or pence [number of bags] can only come from $5 \times 10 \div 250 (= 0.2)$ or $5 \times 100 \div 250 (= 2)$ or $5 \div 250 (= 0.02)$ 3/10 or 0.3 is not enough but should be awarded 2 marks Award P3 for 130(%)
		P1	for [number of bags] $\times 0.65$ or "20" $\times 0.65 (= 13)$ or "2.60" $\times 5 (= 13)$ OR for $10 \div "20"$ oe ($= 0.50$) OR for $0.65 \times 4 (= 2.60)$ and $10 \div 5 (= 2)$	
		P1	(dep on previous P1) for a process to find the percentage profit eg $(("13" - 10) \div 10) \times 100$ or $(0.65 - "0.50") \div "0.50" \times 100$ or $(("2.60" - "2") \div "2") \times 100$ OR "13" $\div 10 \times 100 (= 130)$ oe	
		A1	cao	

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Question	Answer	Mark	Mark scheme	Additional guidance
Q5	3 : 5	P1	for process to find 20% or 120% of the cost, eg 8500×0.2 (= 1700) oe or 8500×1.2 (= 10 200) oe	When partitioning all figures quoted must be correct or a full method shown eg $10\% = 8500 \div 10$ (=850) and $20\% =$ "850" + "850" (=1700) May be seen as a fraction of the total eg $\frac{3825}{10200}$ ($=\frac{3}{8}$) Figures at this stage must be expressed as part of a ratio eg 51:85, $\frac{3}{8} : \frac{5}{8}$ Ignore consistent units
		P1	for process to find total cost of payments, eg 12×531.25 (= 6375)	
		P1	for complete process to find value of deposit, eg "10 200" – "6375" (= 3825) or $8500 - "6375"$ (=2125) and "2125" + "1700" (=3825) OR the deposit as a proportion of the total cost, eg $1 - \frac{"6375"}{"10200"}$ ($=\frac{3}{8}$)	
		P1	for finding a correct un-simplified ratio, eg "3825" : "6375" oe or 5:3 or $1.6 : 1$ or $\frac{5}{3} : 1$	
		A1	Accept $1 : 1.6$, $1 : \frac{5}{3}$	

Paper: 1MA1/2H				
Question	Answer	Mark	Mark scheme	Additional guidance
9	12 508.7(0)	P1	for start of process to find interest rate for year 1 eg $12336 \div 12000 (=1.028)$ or $(12336 - 12000) \div 12000 (=0.028)$ OR forms a suitable equation, eg $12000 \times (1 + \frac{x}{100}) = 12336$	
Q6		P1	for complete process to find the interest rate for year 1 eg $(“1.028” - 1) \times 100 (=2.8)$ or $“0.028” \times 100 (=2.8)$ OR correct process to solve correct equation eg $(12336 - 12000) \div 120 (=2.8)$	Rate of interest = 2.8, or $x = 2.8$ implies P2
		P1	for complete process to find the value at the end of 2 years eg $(“2.8” \div 2 + 100) \div 100 \times 12336$	
		A1	accept 12508.7 to 12508.71 or 12509	12509 must come from correct working

Paper: 1MA1/3H				
Question	Answer	Mark	Mark scheme	Additional guidance
11	150 000	P1	for process to find cost in 2007, eg $162\ 000 \div 0.9 (= 180\ 000)$ oe	Award 2 marks for $162\ 000 \div 1.08$ oe
Q7		P1	for process to find cost in 2003, eg $[\text{cost in 2007}] \div 1.2 (= 150\ 000)$ oe	
		A1	cao	

Paper: 1MA1/1H				
Question	Answer	Mark	Mark scheme	Additional guidance
12	$\frac{4}{9}$	P1	for process to find link between volume of Q and volume of P or between volume of R and volume of Q, eg ratio 1.5 : 1 or $Q = 1.5P$ or $P = \frac{2}{3}Q$ or two values in the ratio 1 : 1.5 such as 100 and 150	
Q8		P1	for process to find link between volume of R and volume of P eg 1.5 ² : 1 or two values in the ratio 1 : 2.25 such as 100 and 225	1.5 ² ($=\frac{9}{4}$) is enough for this mark, award P1P1
		A1	for $\frac{4}{9}$ oe fraction eg $\frac{100}{225}$	Accept $P = \frac{4}{9}R$

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Question	Answer	Mark	Mark scheme	Additional guidance
9 (a)	100 : 81	M1	for a scale factor of 0.9 oe used; OR for 10 : 9 oe OR 81 : 100 oe OR 81%	eg. 1 : 0.81, accept 1.23(4...) : 1
Q9		A1	for 100 : 81 oe	
(b)	6 : 5	P1	for 1.44 oe used as the scale factor or 1.2 oe OR for 144 : 100 oe or $\sqrt{144} : \sqrt{100}$ oe OR 5 : 6 oe	eg 1.2 : 1, accept 1 : 0.83(3...)
		A1	for 6 : 5 oe	

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Question	Answer	Mark	Mark scheme	Additional guidance
10	1.8	P1	process to find the amount of interest before tax eg $28.80 \div 20 \times 100 (= 144)$ OR for equation which would lead to ($x =$) 0.018, 1.8 or 1.018 eg $0.2 \times 8000 \times x = 28.8$ or $\frac{8000(100+x)}{100} = 8144$	These numerical expressions may be seen multiplied by 100, eg $\frac{144}{8000} \times 100$
Q10		P1	process to find the interest rate eg $\frac{144}{8000} (= 0.018)$ or $\frac{8144}{8000} (= 1.018)$	
		A1	cao	

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Question	Answer	Mark	Mark scheme	Additional guidance
5	20	P1	for process to find SP of 24 chocolate bars, eg. $0.50 \times 24 (= 12)$ oe or for process to find the overall profit eg $(24 \times 0.5) - 10 (= 2)$ or for process to find CP of one chocolate bar, eg. $1000 \div 24 (= 41.66\dots)$ oe	Working can be carried out in either pounds or pence.
Q11		P1	(dep) for start to a process to find percentage profit, eg. using $\frac{"12"-10}{10}$ or $\frac{"12"}{10}$ or $\frac{50 - "41.66\dots"}{"41.66\dots"}$ oe with consistent units	
		A1	cao	

Paper: 1MA1/2H				
Question	Answer	Mark	Mark scheme	Additional guidance
8 (a) Q12	580	M1	for method to find value before increase eg $551 \div 0.95$	
		A1	cao	
	6354.67	M1	for 6000×1.024 oe (= 6144)	
		M1	for “6144” $\times 1.017^2$ oe	
	A1	for 6354.66 or 6354.67 or 6354.68		

$6000 \times 1.024 \times 1.017^2$ scores M2

If correct answer is stated then subsequently rounded isw and award 3 marks
If correct answer stated and then interest only given as the answer award M2A0

Paper: 1MA1/1H				
Question	Answer	Mark	Mark scheme	Additional guidance
4	Rahim and correct figures	P1	for start to the process to find 20% for Tamara, eg 220000×0.2 oe (= 44000) or 30% for Rahim, eg 160000×0.3 oe (= 48000) OR for $1 - 0.2$ (= 0.8) or $100 - 20$ (= 80) or $1 + 0.3$ (= 1.3) or $100 + 30$ (= 130)	Build up processes are acceptable but must be complete and correct
Q13		P1	for a complete process to find at least one new value, eg $220000 - \text{“44000”}$ (= 176 000) or $160000 + \text{“48000”}$ (=208 000) OR $220000 \times \text{“0.8”}$ (=176 000) or $160000 \times \text{“1.3”}$ (= 208 000)	
		A1	for one correct value, 176 000 or 208 000	
		C1	for correct conclusion supported by correct figures eg Rahim, 176 000 and 208 000	
				Award 0 marks for a correct answer with no supportive working

Paper: IMA1/1H				
Question	Answer	Mark	Mark scheme	Additional guidance
Q14	No (supported)	P1	for start to process, eg. $2100 \times \frac{40}{100} (= 840)$ or $100 - 40 (= 60)$	May compare bonus shares of a single salesman or total bonus share for all 7 salesmen.
		P1	for process to find the 7 salesmen's share of bonus, eg $2100 - "840" (= 1260)$ or $2100 \times \frac{60}{100} (= 1260)$	
		P1	for process to find bonus amount each salesman gets eg $"1260" \div 7 (= 180)$ OR process to find the total bonus for all salesmen if shared equally, eg $\frac{2100}{10} \times 7 (= 1470)$	
		P1	for process to compare what a single salesman gets under each scheme, eg $"180" \times \frac{25}{100} (= 45)$ and $"\frac{2100}{10}" - "180" (= 30)$ or $"180" \times \frac{25}{100} (= 45)$ and $"180" + "45" (= 225)$ oe and $\frac{2100}{10} (= 210)$ or $(\frac{2100}{10} - "180") \div "180" \times 100 (= 16.6...)$ OR process to compare what all salesmen gets under each scheme, eg $"1260" \times \frac{25}{100} (= 315)$ and $"1470" - "1260" (= 210)$ or $"1260" \times \frac{25}{100} (= 315)$ and $"1260" + "315" (= 1575)$ oe and $"1470"$ or $(\frac{2100}{10} - "1260") \div "1260" \times 100 (= 16.6...)$	
		A1	'No' supported by correct figures, eg 45 and 30, 225 and 210, 315 and 210 or 1575 and 1470 or 16.(6...)(% and 25%)	

Paper: 1MA1/1H				
Question	Answer	Mark	Mark scheme	Additional guidance
11	20	P1	for start of process, eg $\frac{125}{100}$ oe or $\frac{100}{125}$ oe or $\frac{25}{125}$	Values of amount of cereal and cost may be used, eg. 100g of cereal costing £10 An acceptable start of a process would then be: 125g of cereal costing £10 using Jack's idea
Q15		P1	for a suitable process to develop a percentage, either 80% or 20% eg. $\frac{100}{125} = \frac{x}{100}$ or $\frac{125-100}{125} = \frac{x}{100}$ or $\frac{p}{1.25m} = \frac{xp}{m}$ or $\frac{0.25p}{1.25m} = \frac{xp}{m}$	
		A1	cao	

Paper: 1MA1/2H				
Question	Answer	Mark	Mark scheme	Additional guidance
Q16	35	P1	use of ratio 2:3 and tin quantities to find overall ratio of litres eg 4:3 or 4 tins : 3 tins or 20 litres (Y) & 30 litres (B)	<p>Could be multiples 4 & 3 (for an amount which is a multiple of 50 litres). "248" is the total cost for making 50 litres</p> <p>"248" \div 5 = 49.6 for 10 litre (1 tin) green paint made Profit on 10 litres is 66.96 – 49.60 = 17.36 Profit on 50 litres is 304.8 – 248 = 86.8 334.8 comes from 5 \times 66.96 and is the selling price for 50 litres green paint</p>
		P1	calculates total cost of making paint eg 4 \times 26 + 3 \times 48 (50 litres) or 104+144 (=248)	
		A1	calculates comparable cost eg 10 litres (1 tin) green paint made as 49.6 or differences (profit) for 1 tin as 17.36 or 5 tins as 86.8 or total comparable costs for 50 litres as 334.8 and 248, for 25 litres as 167.4 and 124 or 1 litres as 33.48 and 24.8	
		P1	for percentage calculation eg $\frac{1736}{4960} \times 100$, $\frac{"334.8" - "248"}{"248"} \times 100$	
		A1	cao	

Paper: 1MA1/3H				
Question	Answer	Mark	Mark scheme	Additional guidance
2	260 to 260.5	M1	for $883 - 245 (=638)$ or $883 \div 245 (=3.60..)$ or $883 \div 245 \times 100 (=360(.408...))$ oe	
Q17		M1	for a complete method to find the percentage increase eg " 638 " $\div 245 \times 100 (=260(.408..))$ or $883 \div 245 \times 100 - 100 (=260(.408..))$ oe	
		A1	Accept answers in the range 260 to 260.5	

Paper: 1MA1/2H				
Question	Answer	Mark	Mark scheme	Additional guidance
8	12.5	M1	for $135 - 120 (= 15)$ or $\frac{135}{120} (= 1.125)$ or $\frac{135}{120} \times 100 (= 112.5)$	
Q18		M1	for “15” $\div 120 \times 100$ or “112.5” $- 100$ or (“1.125” $- 1) \times 100$	
		A1	cao	

Paper: 1MA1/2H				
Question	Answer	Mark	Mark scheme	Additional guidance
10	17500	P1	for a process to find the value at the end of year 1, eg $10914.75 \div 0.81 (= 13475)$ or $10914.75 \div 0.77 (= 14175)$ or for finding the combined multiplier, eg $0.77 \times 0.81 (= 0.6237)$	
Q19		P1	for a complete process to find the initial value, eg “13475” $\div 0.77$ or “14175” $\div 0.81$ or $10914.75 \div “0.6237”$	
		A1	cao	

Paper: 1MA1/2H				
Question	Answer	Mark	Mark scheme	Additional guidance
Q20	600.74	M1	works out decrease for one year eg $679 \times 4 \div 100 (= 27.16)$ oe or $679 \times (100 - 4) \div 100 (= 651.84)$ oe	Implied by $679 \times 0.12 (= 81.48)$ or $679 \times 0.88 (= 597.52)$
		M1	for compound method, eg $679 \times "0.96"^{t}$, $t \geq 2$ or $"651.84" \times "0.96" (= 625.76..)$ or $"651.84" \times 0.04 (= 26.07)$ or for answers in the range 600.71 to 600.74	Values may be rounded or truncated
		A1	for 600.71 or 600.72 or 600.73 or 600.74	If correct answer seen, and then difference found award M1M1A0

Paper: 1MA1/3H				
Question	Answer	Mark	Mark scheme	Additional guidance
4	Chic Decor with correct supporting evidence	P1	<p>for process to find cost of 15 rolls from Chic Decor, eg $\frac{15}{3} \times 36 (= 180)$</p> <p>or</p> <p>for process to find cost of 15 rolls from Style Papers at normal price, eg $\frac{15}{5} \times 70 (= 210)$</p> <p>or</p> <p>for process to find cost of 1 roll from Chic Decor, eg $36 \div 3 (= 12)$</p> <p>or</p> <p>for process to find cost of 1 roll from Style Papers, eg $70 \div 5 (= 14)$</p> <p>or</p> <p>for process to find the cost of 5 rolls from Chic Decor, eg $\frac{36}{3} \times 5 (= 60)$</p>	Could compare the costs for any number of rolls
Q21		P1	<p>for any first step in using the discount at Style Papers, eg $0.12 \times "210" (= 25.2(0))$ or $0.12 \times "14" (= 1.68)$ or $0.12 \times 70 (= 8.4(0))$</p> <p>or $1 - 0.12 (= 0.88)$</p>	
		P1	<p>for full process to find cost from Style Papers, eg. $"210" - "25.2" \text{ oe } (=184.8(0))$ or $"0.88" \times "210"$</p> <p>or for $"14" - "1.68" \text{ oe } (= 12.32)$ or $"0.88" \times "14"$</p> <p>or for $70 - "8.4(0)" \text{ oe } (= 61.6(0))$ or $"0.88" \times 70$</p>	
		C1	<p>for Chic Decor with fully correct figures</p> <p>eg 180 and 184.8(0)</p> <p>or 12 and 12.32</p> <p>or 60 and 61.6(0)</p>	

Paper: 1MA1/3H				
Question	Answer	Mark	Mark scheme	Additional guidance
10	24000	P1	for use of either 0.9 or 0.875 or for 18900 (after 2 years)	
Q22		P1	for using $0.9^2 \times 0.875 (= 0.70875)$ oe or for 21000 (after 1 year)	
		A1	cao	